UNITED
NATIONS

E

Economic and Social
Council

Distr.
GENERAL

ECE/CES/2009/33
29 April 2009

ENGLISH ONLY

ECONOMIC COMMISSION FOR EUROPE **STATISTICAL COMMISSION**

CONFERENCE OF EUROPEAN STATISTICIANS

Fifty-seventh plenary session
Geneva, 8-10 June 2009
Item 4 of the provisional agenda

SEMINAR ON STRATEGIC ISSUES IN BUSINESS STATISTICS

SESSION II: EMERGING AREAS, NEW DEVELOPMENTS AND USER NEEDS IN BUSINESS STATISTICS

WHY OFFICIAL STATISTICS DID NOT SEE THE FINANCIAL CRISIS COMING – LESSONS TO BE LEARNED

Note by Statistics Netherlands

I. OFFICIAL STATISTICS GAVE NO SIGNALS AT ALL

1. There has been much criticism in recent months from within as well as outside the statistical community. How is it possible that official statistics did not signal that a financial crisis of this magnitude was coming? In analyzing this question we found that official statistics should and indeed can be changed. The financial crisis is the immediate cause, but the problem is greater. It is about the usefulness of official statistics in a wider sense.

II. THE FINANCIAL CRISIS: CAUSES, SYMPTOMS AND EFFECTS

2. We feel that we can compare the way the economy suffers from a financial crisis more or less with the way a patient suffers from an illness. An illness can be described in terms of symptoms (fever, pain), and/or effects (not being able to work, not feeling well). Once we know the causes (inflammation, virus) we can prescribe the right therapy and maybe take prevention

measures in the future. The same holds true for the financial crisis: first we saw the symptoms in the financial world, then the effects in the real economy, now we try to analyze the causes and find the therapies. There is no general agreement yet on the real *causes* of the financial crisis, and herefore we risk just treating the symptoms. Several possible causes are mentioned:

(a) In the USA loans and mortgages became cheaper in the years after the internet crisis (2000) and 9-11 (2001), as a result of lowering the official interest rate by the U.S. Federal Reserve System, in an attempt to prevent a recession;

(b) There was too much liquidity in the financial system by injections from the central banks and a rush of Asian investment capital;

(c) In the USA a number of new types of mortgage were implemented, enabling many people – even those who could not afford it - to buy a bigger and more expensive house;

(d) As a result house prices rose sharply, and continued to rise. Houses were more and more bought to speculate with. When the interest rates went up in 2006, this process came to a halt.

3. It does not seem to be part of the core business of statistical agencies to analyze the causes of the financial crisis on their own. However, they should participate in the analysis together with planning agencies and central banks. This could be done at the national level, but it is preferable to deal with it in an international context.

4. Another issue on which there is no general agreement yet is how the crisis will proceed. Some predict a fast and more than full recovery, others a long-lasting period of stagnation. This means that statistical agencies have a role in offering a meticulous monitoring system to keep track of all relevant economic variables, to ensure that we will never again be caught unawares.

5. The symptoms of the financial crisis are partly, but not fully, observed by traditional official statistics. Developments like the sharp rise in house prices, shares and stocks are measured, but not the difference between price and intrinsic value. Likewise, the number of newly built dwellings and transfers of ownership are measured, but not arrears of mortgage payments, or – at least not in the Netherlands - the number of foreclosures.

6. Effects of the financial crisis in the real economy become visible in regular statistics and official publications on the short-term economic situation, based on short-term turnover and price statistics, quarterly GDP, international trade statistics, employment statistics and so on. Of course the diagnosis comes far too late to prevent serious problems when the real economy has already been affected.

III. TOWARDS USEFUL OFFICIAL STATISTICS

7. It has become clear that official statistics will have to focus not only on the symptoms and effects, but should consider the relation between them as well, to get a complete picture and to try and find causes. Another compelling need is timeliness: the most important trends have to be available on a monthly basis, soon after the end of the month.

8. If statistical agencies cannot meet these needs, the competition with other providers of statistical information may soon be lost. For instance, some newspapers present very up-to-date information on their websites, with international comparisons and very nicely visualized.

IV. CONSEQUENCES FOR STATISTICAL METHODS AND PROCESSES

9. It is important for statistical agencies to identify, together with key users, a limited set of variables to describe the short-term economic situation, and to monitor the effects and symptoms of the financial crisis. This should be done in an international context. Analysing the real causes may lead to additional variables to be monitored.

10. Of course we tend to look at the financial crisis these days, but we should realize that other events may come up in the future to which we may also have to pay attention.

11. Because of the urgent need for up-to-date statistics, it will be necessary to adopt creative and unorthodox methods. The use of proxy variables, collecting data during the month instead of afterwards, and smart combinations of administrative and questionnaire data are examples that have to be elaborated.

12. Current statistical processes have to be thoroughly investigated for possibilities to speed up output substantially. Statistical agencies are used to accepting that, for instance, the quarterly GDP figures are available some 45 days after the quarter ends. In 2009 this is no longer acceptable, we have to find ways to provide monthly trend figures within two weeks after the end of the month.

V. CONSEQUENCES FOR CULTURE AND STAFF

13. Analyzing how the economy works and behaves has to be part of the core business of a statistical agency. Statisticians should not be overtaken by events, but be able to predict what kinds of information are needed and will be asked, and see to it that economic statistics reflect the economic reality.

14. This means that statistical agencies have to adopt a more outside-in approach. User needs have to be leading in the programming and planning of work. The more we know about the users and how they use statistics, the better we can meet their wishes.

15. The traditional culture and staff in statistical agencies have to change completely: outside-in thinking should replace inside-out thinking, creative and flexible methods should replace standard processes, and an analytical mind set should replace bureaucratic views.

16. Using best practices and sharing experiences with colleagues from other statistical agencies has to become the rule rather than the exception. The first condition that has to be fulfilled to realize this is to speak one language. The use of English as a company language is the easiest way.

VI. HOW TO MANAGE THIS IN A STATISTICAL AGENCY

17. A programme has to be set up, consisting of projects for developing new methods and statistics, and for accelerating current statistics. These projects will have to be well-designed and led by expert project managers, to ensure that they will be successful and can serve as examples of a new working method.

18. A considerable number of colleagues has to be involved in these projects, to reach a real change in approach and mentality. This means a lot of extra work on the one hand, and substantial cuts on the other hand. However, like in the financial and business world, this trimming and cutting back also has its advantages besides the disadvantages.

19. The statistical agency will eventually consist of two parts: one very efficient data-collecting and data-processing part for the production of regular statistics, and another part focusing on contacts with users, economic analysis, creativity and out-of-the-box-thinking, where quality is more important than efficiency. Of course it is up to the management of the agency to decide which part is in the lead, but survival in the market of statistics means we have little choice.

20. For Statistics Netherlands this is not a mission accomplished, but we really try to reach these goals. A few examples will show how this is done, and we hope for feedback, suggestions and best practices from the other participants.

VII. AN EXAMPLE OF OUTSIDE-IN THINKING: THE SERVICES SECTOR PROGRAMME

21. Policymakers and scientists are asking themselves whether an economy that is increasingly becoming dependent on services will be sufficiently able to innovate, increase productivity and realise economic growth. Services have become an important sector of the Dutch economy: they now account for more than 70 percent of the gross domestic product (GDP) and for more than 80 percent of total employment. More and more production activities are being outsourced to Eastern Europe and Asia.

22. The Services Sector Programme is a spearhead in Statistics Netherlands' long-term programme. It focuses on broadening and deepening statistical information on the services sector.

23. With help of an external advisory board, a strategy was chosen consisting of the following elements:

(a) 'Think services': do not make extra statistics on services, and leave the statistical programme of Statistics Netherlands intact, but go through all existing statistics to check if they are sufficiently service-oriented;

(b) Ask external users what they really want to know about the services sector. Do not assume that you can predict their wishes from behind your desk;

(c) Use best practices from other statistical agencies. They are willing to share their experiences and the methods they developed.

24. From the inventory of external information needs we learned that there was a lot of low-hanging fruit, and also a reasonable amount of more difficult problems that had to be dealt with.

25. First of all, we were shocked to learn that 'heavy users' asked for information that is already available on our website. They did not realize it was there, had not found it, or asked for it. What we did was to improve the accessibility of the data.

26. Second, there is a category of information needs that we will be able to answer in the near future, because improvements have already been carried out. The new NACE and the new SBS regulation ensure that important parts of the services sector can be described much better and in more detail than before.

27. Third, different projects are and have been carried out to address the more difficult problems. They lead to new methods and new statistical information, often through integrating data already available from different sources, administrative and/or from questionnaires. If possible the projects finish with a transfer to and implementation in regular statistics.

28. Projects already realized:

(a) Business services: Much attention was given to improving the accessibility of business services data on the website (theme page Financial and business services). Coherent analysis of data from several statistics (employment statistics, business tendency survey, short term turnover statistics, price statistics), for six different branches within the business services sector, is developed for publication on a quarterly basis in the *Business services monitor*;

(b) Distributive trade: In this project an electronic quarterly publication, the *Distributive trade monitor*, was set up in cooperation with the regular statistics department. An analysis of energy costs provided evidence that the figures were reliable and could be published separately from other housing costs. Data for market and street trading were analyzed as well. The management of the regular statistics will decide on the basis of the results if they will publish these data in the future. Finally, the possibilities of the use of scanner data from supermarkets – already in use for price statistics - for making statistics on turnover and turnover specifications were analyzed;

(c) Transport: Important issue in this project was linking micro data from the structural business statistics for the transport sector, focusing on enterprises with transport as their main activity, with the data from the functional transport statistics, focusing on transport in terms of tons and kilometres. In that way it is made possible to analyze economic results in relation to physical transport results. This was realized for inland shipping, and we plan to do the same for road transport in the regular statistics environment;

(d) International sourcing: In cooperation with Eurostat and twelve other EU member countries a survey was carried out to establish statistical evidence about the level, patterns and possible impacts of international sourcing (also referred to as offshoring, outsourcing, or

delocalisation). Results were published in a joint publication of the Nordic countries and the Netherlands, and also on the website of Statistics Netherlands, and by Eurostat;

(e) Relations between the manufacturing and services sector: Part of the growth of the services sector is caused by the fact that enterprises in manufacturing concentrate more and more on their core business. These enterprises have made themselves dependent of the services sector, especially for legal advice, accountancy, advertising, research and temporary workers.

29. Projects under way:

(a) Holding companies and intraconcern services: This project aims to improve the description of the economic relevance of multinationals that have their headquarters in the Netherlands. Business units belonging to the same multinational render services to each other, but not always against market prices. This causes problems, especially for R&D, which has to be registered as investments rather than expenses in the new SNA. In this project we explore what information can be made available by major enterprises, if necessary on a custom-made basis. The cooperation of several departments of Statistics Netherlands is crucial for success;

(b) Fast growing companies: By linking micro data from different sources (Social Statistics Database, Business demography statistics, Structural business statistics, Innovation survey) fast-growing companies were selected and described in terms of their characteristics;

(c) From employee to entrepreneur, from entrepreneur to employee: In the first of these two projects the focus is on employees changing over to entrepreneurship, in the second project on entrepreneurs who become employees (again, or for the first time). These analyses are also based on micro data from the Social Statistics Database, linked with Business demography data;

(d) The creative industry: Some authors claim that the creative sector is the moving force of economic growth in modern societies. However, first of all a clear definition of the creative sector is required to determine which parts of arts, literature, media, publishing, design, fashion, architecture, advertising, gaming, software, knowledge and so on should be taken into account. Next the possibilities for meaningful description will be analyzed.

30. Because the results of most of the projects are transferred to, and implemented in the regular statistics, there is a lot of cooperation between the programme staff and the regular staff. This means that contacts with the outside world, nationally and internationally, and the awareness that user needs are the reason for the existence of a statistical agency, are spread widely in a natural way. Because the programme will be finished within a few years, some of the programme staff will transfer to jobs in the regular departments, strengthening these effects even more. Other programme staff will again be involved in new innovative projects.

VIII. AN EXAMPLE OF CREATIVE REDESIGNING ECONOMIC STATISTICS: TOTALS FIRST, DETAILS LATER

31. Short-term statistics, structural business statistics, and the national accounts all provide data on turnover trends, but the results differ sometimes. To solve this problem and to realize a major efficiency breakthrough simultaneously, it was decided to make a full turnaround. In the

future we will first calculate the short-term trends in accordance with the totals of the supply and use tables, and afterwards provide the details of the structural business statistics and the supply and use tables. This approach requires technical and methodological changes, plus a complete reorganization of the working processes. In this Redesign of Economic Statistics Programme much methodological work has been carried out already, but full implementation will take another few years.

32. Projects that are carried out:

(a) Units base: Statistical units from different sources (administrative data, primary data collection) do not match, due to the fact that in the Netherlands even small enterprises consist of several legal units. Moreover, the tax authorities allow enterprises to combine legal units into tax units - more or less as they wish. It is common to use differently combined units for value added tax (VAT) and for corporate tax. The simple situation of one enterprise that is one legal unit that is one establishment that is one tax unit is rather rare. Therefore it is crucial to have a units base serving as a backbone for statistics, in which different units are linked;

(b) Direct estimates of totals: Until now we first make short-term statistics and structural business statistics on the basis of tax data (for SMEs) and primary data (for large companies). National accounts, including supply and use tables, are made afterwards. The new approach implies that totals are estimated on the basis of the administrative data, to be used as short-term indicators and as frames for the supply and use tables. This has been tested and proven feasible;

(c) New set-up of structural business statistics: In the new approach, once the totals have been estimated, the supply and use tables will be made on the basis of administrative data in combination with few primary collected data. A test shows that a considerable part of the variables needed to fulfil the obligations of the Eurostat regulation can be obtained in this way. Some additional data collection is needed, sometimes only once every three or five years, but substantially less often than in the current situation.

33. The new approach will be in use for the statistical year 2009, probably shadowed by the current approach.

IX. EXAMPLES OF PROVIDING SETS OF MEANINGFUL INDICATORS BUSINESS CYCLE TRACER (BCT)

34. Statistics Netherlands' Business Cycle Tracer (BCT) is a tool to assist in the analysis of the current state and the course of the Dutch economy. Just as a glance at the clock will tell us the time of day, a glance at the BCT will tell us what stage of the business cycle we are in. As the name suggests, the BCT traces the cyclical nature of economic developments. Periods of high growth alternate with periods of slow or even negative growth.

35. The state of the business cycle is determined using a selection of key macro-economic indicators. Portraying the fifteen indicators together results in a coherent picture of the state of the economy at a particular moment in time.

36. For each indicator, the deviation from its long-term trend is given on the vertical axis (the y-axis) of the BCT and the period-on-period change is given on the horizontal axis (the x-axis).

37. Four situations can be distinguished:

(a) Above trend and increasing (upper right-hand quadrant);

(b) Above trend and decreasing (upper left-hand quadrant);

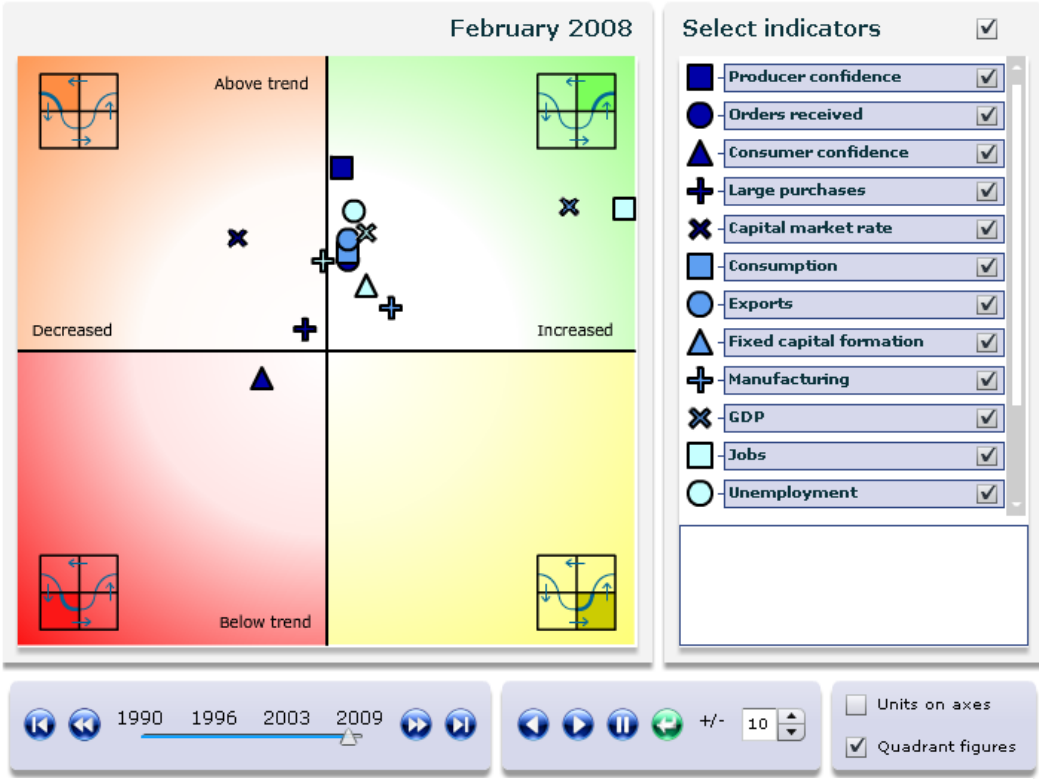
(c) Below trend and decreasing (lower left-hand quadrant);

(d) Below trend and increasing (lower right-hand quadrant).

38. The indicators move anticlockwise through the different stages of the business cycle, but the speed and magnitude of the movements of the individual indicators always varies. What we have seen in the period from February 2008 to February 2009 is a shift from the upper right-hand quadrant to the lower left-hand quadrant. Never before since we started the BCT did we see such a quick shift. Sentiment indicators (such as consumer and producer confidence) are the leading indicators in the cluster, while labour market indicators (unemployment and labour volume) lag somewhat behind. The website shows the monthly figures from January 1990 onwards and people can play with the animations for all variables or for a selection of variables[1].

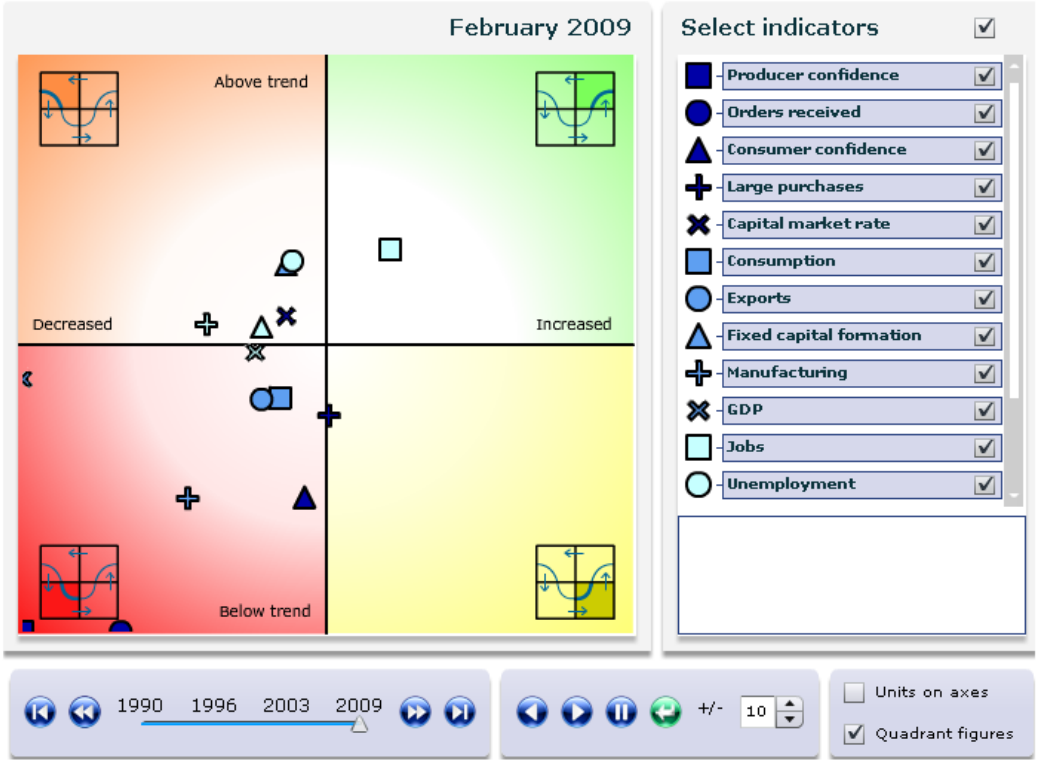
39. Statistics Netherlands succeeded in defining a single turning point indicator, in which the 15 indicators are weighed together, with the ability to signal points of inflection of the business cycle. It is meant to indicate when an expansion period is over the top and when a recession ends. However, this indicator is still in an experimental phase and not yet published.

[1] http://www.cbs.nl/en-GB/menu/themas/dossiers/conjunctuur/publicaties/conjunctuurbericht/inhoud/conjunctuurklok/conjunctuurklok2.htm



Business Cycle Tracer, 26 March 2009 09:30

Economic situation remains worrying



X. EXAMPLES OF PROVIDING SETS OF MEANINGFUL INDICATORS (II) FACTSHEET FAST INDICATORS

40. Statistics Netherlands has set up a project to even better monitor the current economic situation with fast indicators. It will be a supplement to the BCT. In this project several kinds of indicators are considered:

(a) Physical indicators providing information on, for instance, volumes of traffic, number of customers, use of energy. Most of this information is not collected by Statistics Netherlands itself, but easily available or accessible from other sources. These data are often more or less integral in character, which is very useful, but they can also have peculiarities that give them limited significance;

(b) Indicators from special data collection by Statistics Netherlands from a small and select sample of enterprises. This kind of indicator has the advantage of tailor-made concepts and definitions, but the disadvantage of possible bias;

(c) Financial and monetary indicators: interest rates, consumer price index, credit loans, share prices, euro-dollar ratio;

(d) Housing market indicators: number of houses sold, prices;

(e) Indicators of the world economy: trends in world trade, prices of raw materials.

41. These indicators will be presented in a factsheet. Together they should give a first impression of what is going on in the economy. We are still working on a full connection between these indicators and GDP, because in the end we try to present a monthly GDP as soon as possible. What we tried is to find trend indicators for the important components of GDP. We succeeded for most components, although we had to rack our brains over some of them, especially in the business services where most of our usual statistics are collected on a quarterly basis only. What we still have to do is analyze how to weigh the different indicators in a total single indicator that can serve as a leading indicator for the GDP trend. Just like the index of producer confidence proved to be the leading indicator for industrial production with a time lag of a few months.

XI. CONCLUSIONS

42. Summing up the conclusions:

(a) Official statistics failed to signal the financial crisis. If official statistics wants to be of any use in the future, it has to identify and monitor symptoms and effects, but also causes;

(b) It will not be enough to focus on signs of a financial crisis alone. Official statistics ought to meet user needs, and be pro-active in systematically analyzing what is going on in the economy;

(c) The timeliness of short-term statistics has to be improved drastically. Users need monthly trend figures of GDP, turnover, employment, consumption, exports and so on within two weeks after the end of each month;

(d) To realize these goals we will need creative and unorthodox statistical methods; processes have to be adapted radically;

(e) Improving accessibility and integrating data from different sources, whether at the micro-level or aggregated, is relatively simple and sometimes yields surprisingly good results;

(f) Working methods, staff, and company culture have to change: an outside-in approach, analytical minds and more flexibility are needed. Sharing experiences with other statistical agencies is much easier if English is adopted as the common language;

(g) Statistical agencies must succeed in changing their course in time, or lose the competition with other providers of statistical information.

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